WEEKLY PROGRESS REPORT – TRC SOLUTIONS

Gowanus Canal Turning Basin 4 Dredging and Capping Pilot Study
Brooklyn, New York

Project number: 283126

Period: October 2 to October 6, 2017

Date of Report: October 28, 2017

Rev: 1

Prepared For: Gowanus Environmental Remediation Trust

On-Site Activities Conducted During Week:

Sevenson Environmental Services (SES)

SES mobilized remaining project equipment and materials. Activities completed this week include:

- Mobilization and assembly of marine equipment
- Mobilization of marine equipment to the 4th Street Turning Basin
- Installation of pile supports for air bridge assembly
- Installation of air curtain within 4th Street Turning Basin
- Construction of wastewater treatment plant ongoing.
- Permitting:
  - Hydrant permit was issued by New York City Department of Environmental Protection on September 28, 2017.
  - Street Closure Permit for Huntington Street was submitted to New York City Department of Buildings on October 5, 2017.

Access Dredging:

- Access dredging activities began on October 5, 2017
  - 386 cubic yards of sediment were dredged during this week

Water Treatment and Monitoring

- Wastewater treatment plant construction not complete.
- Wastewater treatment plant tightness testing completed and accepted between October 3 and 5, 2017.

Air Curtain System

- Air curtain system working as approved as noted by Geosyntec. Sevenson to monitor and install diffuser ports as necessary.

Turbidity Monitoring

- Turbid water not observed migrating from the 4th Street Turning Basin.

Odor and Vapor Suppression

- Odor and vapor suppression foam not deployed.

Debris Screening Activities at Citizens Site

- Screened approximately 50 cubic yards of material utilizing on-site 6-inch grizzly bar vibrator screener.
- Culturally significant debris not observed during dredging operations by dredge supervisor trained by AHRS. Accumulated material retained by screener removed and segregated daily for inspection by AHRS. Debris mainly unidentifiable prior to segregation and cleaning. Tires, timbers, and concrete majority of debris.

Sediment Stabilization Activities

- Commenced in barge stabilization activities on October 6, 2017.
- Placed and mixed 4 tons (1 ton per supersac) of Portland cement in 2,225 cubic yard hopper scow.
- Paint filter testing of stabilized sediment not required – material not leaving site via truck.

Quality Assurance and Control - Geosyntec

- Deployed water quality buoys. No exceedance of turbidity trigger level of a measurement over a one-hour period of the sentinel buoy 20 nephelometric turbidity units (NTUs) greater than the ambient buoy during access dredging.
- Measurements for 10/5/17:
  - Daily average for ambient buoy – 8.0 NTU
  - Daily average for sentinel buoy – 8.0 NTU
  - Greatest difference between ambient and sentinel buoy during 15-minute interval – 7.7 NTU at 0845

- Measurements for 10/6/17:
    - Daily average for ambient buoy – 7.6 NTU
    - Daily average for sentinel buoy – 7.0 NTU
    - Greatest difference between ambient and sentinel buoy during 15-minute interval – 7.4 NTU at 1130 and 1145

Community Air Monitoring Program – TRC CAMP

- Operated and maintained two (2) air monitoring stations at the upland staging area and five (5) monitoring station at the 4th Street Turning Basin Area.
- No exceedances of particulate matter of 10 microns in diameter or smaller (PM_{10}) or total volatile organic compounds (TVOC) of the action level of 150 micrograms per cubic meter ($\mu g/m^3$) or 1,000 parts per billion (ppb), respectively.
- Maximum weekly measurements of PM_{10} in $\mu g/m^3$
    - Station 1 – 20 $\mu g/m^3$ recorded on 10/5/17
    - Station 2 – 23 $\mu g/m^3$ recorded on 10/5/17
    - Station 3 – <1 $\mu g/m^3$ recorded throughout week
    - Station 4 – 54 $\mu g/m^3$ recorded on 10/5/17
    - Station 5 – 43 $\mu g/m^3$ recorded on 10/5/17
    - Station 6 – 62 $\mu g/m^3$ recorded on 10/5/17
    - Station 7 – 20 $\mu g/m^3$ recorded on 10/5/17
- Maximum weekly measurements of TVOC in ppb
    - Station 1 – 65 ppb recorded on 10/6/17
    - Station 2 – 113 ppb recorded on 10/6/17
    - Station 3 – 110 ppb recorded on 10/5/17
    - Station 4 – 112 ppb recorded on 10/6/17
    - Station 5 – 138 ppb recorded on 10/6/17
    - Station 6 – 45 ppb recorded on 10/2/17
    - Station 7 – 44 ppb recorded on 10/4/17
- All real-time readings of hydrogen sulfide, ammonia, or formaldehyde less than instrument reporting limit.
- 24-hour sample collected at ST-4 on 10/5 through 10/6. Laboratory turnaround time is 10 business days.

Noise and Vibration Monitoring – Wilson-Ihrig

- Operated and maintained one (1) noise monitor on each side of the canal.
- No exceedances of the hourly Leq noise limit of 80 dBA for daytime and evening time periods.
- Greatest hourly Leq noise measurements
    - Northern monitor (NM-1) – 71.2 dBA during 1000-1100 on 10/4/17
    - Southern monitor (NM-2) – 61.5 dBA during 1000-1100 on 10/2/17

Cultural Natural Resource Monitoring – Archeology and Historic Resource Services (AHRS)

- Conducted on-site training for personnel to identify potential cultural resources during dredging operations on 10/4/17.
- First on-site inspection of debris to be conducted on 10/11/17.

Two-Week Look Ahead:

- Sevenson:
  - Continue and complete access dredging in preparation for sheet pile installation.
  - Perform test pits in areas identified where known or suspected cultural resource are located nearby.
  - Mobilize steel sheeting in preparation of installation of bulkhead supports.
  - Commence installation of steel sheet pile bulkhead supports.
  - Collect and analyze sample of tank tightness testing water to confirm decontamination of wastewater treatment system prior to delivery.
  - Complete construction of wastewater treatment facility and begin treating wastewater.
- Geosyntec – Perform construction quality assurance responsibilities. Collect first weekly effluent sample from wastewater treatment system.
- TRC CAMP Monitoring – Perform community air monitoring.
- Wilson-Ihrig – Perform noise and vibration monitoring. Install bulkhead vibration monitors on 10/12/17.
- AHRS – Conduct first on-site inspection of debris on 10/11/17 and observe test pit operations 10/16 and 10/17/17.

Project Milestones: Key project milestones either established or completed this period include the following:

- Mobilization complete on October 4, 2017
- Access dredging commenced on October 5, 2017
- Wastewater treatment plant tightness testing completed and accepted between October 3 and 5, 2017.

Attachments:

1. Geosyntec Water Quality Monitoring Weekly Data Summary
2. TRC Weekly CAMP Report
3. Wilson-Ihrig Weekly Noise Monitoring Report
4. Water Treatment System Monitoring – Plant not operating at this time
5. Cumulative Dredged Material Chart

Client Name:	Site Location:	Project No.:
Gowanus ERT	TB-4 Pilot Study	283126.0000.0001

Photo No.	Date
001	10-2-2107

Description
Placing concrete blocks on opposite end of PC-800 barge to allow excavator to move forward. Notice crane barge in the background, making a trial run up the Gowanus Canal. Tested clearances and 9th Street Bridge. Ninth Street bridge operational.

Photo No.	Date
002	10-3-2017

Description
Placing office/break sea box onto excavator spud barge.

Client Name:	Site Location:	Project No.:
Gowanus ERT	TB-4 Pilot Study	283126.0000.0001

Photo No.	Date
003	10-4-2107

Description
Assembling 6" Grizzly bars onto stands at 2,225 cubic yard scow.

Photo No.	Date
002	10-4-2017

Description
Tug pushing dredge barge up the canal to Turning Basin #4.

Client Name:	Site Location:	Project No.:
Gowanus ERT	TB-4 Pilot Study	283126.0000.0001

Photo No.	Date
005	10-5-2107

Description
Placing first bucket into hopper scow.

Photo No.	Date
006	10-5-2017

Description
Moving barges into position with the use of the excavator.

Client Name:	Site Location:	Project No.:
Gowanus ERT	TB-4 Pilot Study	283126.0000.0001

Photo No.	Date
007	10-5-2107

Description
Material in 2,225 CY scow, after screening.

Photo No.	Date
008	10-6-2017

Description
Adding Portland cement to excavated material in the 2,225 CY scow.

GEOSYNTEC WATER QUALITY MONITORING WEEKLY DATA SUMMARY

Prepared for

Gowanus Canal Remedial Design Group

GOWANUS CANAL SUPERFUND SITE DREDGING AND CAPPING PILOT STUDY Water Quality Monitoring Weekly Data Summary

October 2nd, 2017

Report Contents

- Scope of Monitoring
- Turbidity Buoy Data
- Handheld Measurements
- Summary of Visual Observations
- Report of Exceedances

Prepared by

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1. SCOPE OF MONITORING

The following report summarizes water quality monitoring data collected during the week of October 2nd, 2017. This includes two days of monitoring prior to dredging and monitoring during the first two days of dredging on October 5th and October 6th. Two turbidity buoys were deployed to monitor turbidity during the pilot study. One turbidity buoy was deployed just outside of the 4th Street Turning Basin and is referred to as the sentinel buoy. A second turbidity buoy was deployed further upstream in RTA 1 in order to monitor background turbidity unaffected by on-water construction activities. This turbidity buoy is referred to as the ambient buoy. A map indicating the approximate locations of the turbidity buoys is provided in Figure 1. Each turbidity buoy was equipped with a YSI 600 OMS water quality meter with optical turbidity sensor. The buoys were programmed such that readings were taken every 15 minutes. After each measurement, the turbidity data were transmitted to a FTP site via telemetry. This report provides the turbidity data collected every 15 minutes from both the ambient and sentinel buoys during two days prior to the start of dredging and between 7 AM and 5 PM each day of dredging during the week of October 2nd. Average and maximum turbidity are also presented. Preliminary analysis of the turbidity data suggests that turbidity was not significantly elevated during operations. In addition to the turbidity buoy data, visual observations of turbidity and sheen are also summarized. The data provided in this summary report have not yet been validated and should be considered preliminary.

2. TURBIDITY BUOY DATA

The following section provides turbidity data for the sentinel and ambient turbidity buoys from 7 AM to 5 PM during dredge operations on October 5th and October 6th, 2017. Data prior to the start of dredging is provided in Appendix A.

2.1 Thursday, October 5th, 2017

Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)
10/5/2017 7:00	6.1	2.7	N	10/5/2017 12:15	8	8.5	Y
10/5/2017 7:15	6	2.5	N	10/5/2017 12:30	7.2	10.6	Y
10/5/2017 7:30	6.8	4.6	N	10/5/2017 12:45	8.3	7.8	N
10/5/2017 7:45	7.7	5.9	N	10/5/2017 13:00	7.4	10.4	Y
10/5/2017 8:00	6.9	6.5	N	10/5/2017 13:15	8.6	6.5	N
10/5/2017 8:15	6.5	7.6	Y	10/5/2017 13:30	8.8	6.3	N
10/5/2017 8:30	7	11.1	Y	10/5/2017 13:45	9.4	7.5	N
10/5/2017 8:45	6.4	14.1	Y	10/5/2017 14:00	9.7	8.5	N
10/5/2017 9:00	7.4	8.9	Y	10/5/2017 14:15	9.2	7.8	N
10/5/2017 9:15	6.9	8.3	Y	10/5/2017 14:30	9.8	8.4	N
10/5/2017 9:30	7	9.8	Y	10/5/2017 14:45	9.9	8	N
10/5/2017 9:45	9.1	7.4	Y	10/5/2017 15:00	8.4	10	Y
10/5/2017 10:00	8.5	6.6	N	10/5/2017 15:15	8.3	8.9	Y
10/5/2017 10:15	8.4	9.8	Y	10/5/2017 15:30	10.1	8.7	N
10/5/2017 10:30	8.9	9.5	Y	10/5/2017 15:45	8.7	7.9	N
10/5/2017 10:45	8.8	10.1	Y	10/5/2017 16:00	8.3	6.7	N
10/5/2017 11:00	7.8	6.4	N	10/5/2017 16:15	7.7	7.4	N
10/5/2017 11:15	7	7.8	N	10/5/2017 16:30	8.2	7.3	N
10/5/2017 11:30	7.8	7.4	Y	10/5/2017 16:45	8.2	7.4	N
10/5/2017 11:45	7.2	11.3	Y	10/5/2017 17:00	7.2	7.5	Y
10/5/2017 12:00	7.6	9.5	Y				
Average	8.0	8.0	Y				
Maximum	10.1	14.1	Y				

2.2 Friday, October 6th, 2017

Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)
10/6/2017 7:00	5.8	2.6	N	10/6/2017 12:15	7.3	9	Y
10/6/2017 7:15	5.4	3.2	N	10/6/2017 12:30	7.2	8.3	Y
10/6/2017 7:30	6	4.8	N	10/6/2017 12:45	7.6	7.9	Y
10/6/2017 7:45	6.9	5.2	N	10/6/2017 13:00	7.1	6.6	N
10/6/2017 8:00	5.6	5.7	N	10/6/2017 13:15	8.7	7.8	N
10/6/2017 8:15	6.2	6.7	Y	10/6/2017 13:30	7.9	7.5	N
10/6/2017 8:30	7.1	6.7	Y	10/6/2017 13:45	8	8	N
10/6/2017 8:45	8.5	7.3	Y	10/6/2017 14:00	8	9.2	Y
10/6/2017 9:00	6.8	6.5	N	10/6/2017 14:15	8.3	6.2	N
10/6/2017 9:15	7.3	7.6	Y	10/6/2017 14:30	7.8	6.3	N
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10/6/2017 9:45	8.1	7.5	N	10/6/2017 15:00	8.1	5.1	N
10/6/2017 10:00	8.9	7.5	N	10/6/2017 15:15	8.9	7.4	N
10/6/2017 10:15	8.4	7.4	N	10/6/2017 15:30	8.8	7.6	N
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10/6/2017 11:00	8.4	8.5	N	10/6/2017 16:15	9.1	5.9	N
10/6/2017 11:15	8.3	8.8	Y	10/6/2017 16:30	7.1	6.1	N
10/6/2017 11:30	7.1	10.5	Y	10/6/2017 16:45	6.6	5.2	N
10/6/2017 11:45	7	10.4	Y	10/6/2017 17:00	6.1	5.5	N
10/6/2017 12:00	8.2	10.7	Y				
Average	7.6	7.0	N				
Maximum	9.1	10.7	Y				

3. HANDHELD MEASUREMENTS

No handheld measurements were collected during this reporting period.

4. SUMMARY OF VISUAL OBSERVATIONS

Visible turbidity plumes generated from dredging on October 5th and October 6th were limited in size and only seen in the vicinity of the dredge grabs and the loading scow. Visible turbidity plumes did not reach the air curtain. On October 5th at 10:50 a slight sheen was observed inside the air curtain and approximately 30 feet outside of the air curtain. This sheen outside of the air curtain was traced upstream to the 3rd Street Bridge. Since this sheen was present upstream of the work zone it was determined that the sheen observed outside of the air curtain was not generated from dredging activities. Prior to the start of dredging on October 6th sheen was observed outside of the turbidity curtain flowing downstream toward TB4. This sheen was again determined to be representative of background conditions and not produced as a result of dredging activities.

5. REPORT OF EXCEEDANCES

No exceedances of the water quality monitoring threshold criteria were met during the reporting period. Refer to the Water Quality Monitoring Plan for In-waterway Construction Activities (Geosyntec 2017) for further information regarding the Trigger and Action Criteria. Threshold criteria are summarized as follows:

- **Trigger criterion** – Any of the following:
  - The rolling average of the sentinel buoy turbidity measurements over a one-hour period exceeds the rolling average of the ambient buoy turbidity measurements by 20 NTU excluding any eliminated outlier measurements; or
  - Either an oil sheen or a turbidity plume is visually observed outside of engineering controls and in-waterway construction activities cannot be immediately excluded as the source.
- **Action criterion** – Any of the following:
  - The rolling average of the sentinel buoy turbidity measurements over a one-hour period exceeds the rolling average of the ambient buoy turbidity measurements by 40 NTU excluding any eliminated outlier measurements; or
  - Either an oil sheen or a turbidity plume is visually observed outside of engineering controls and in-waterway construction activities are readily identified as the source.

FIGURES

Legend

- Ambient Buoy
- Sentinel Buoy
- RTA Boundary

300 150 0 300 Feet

Turbidity Buoy Locations

Gowanus Canal, Brooklyn, NY

Gowanus Canal Remedial Design Group

Geosyntec consultants

Beech and Bonaparte engineering p.c.
an affiliate of Geosyntec Consultants

Figure 1

Ewing, NJ | October 2017

X:\03_GIS\mxd\Canal_Wide\Turbidity_Buoy_Locations.mxd; acgomes; 10/11/2017

APPENDIX A
PRE-DREDGE TURBIDITY BUOY DATA

PRELIMINARY DATA
NOT YET SUBJECT TO QC REVIEW

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Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)	Time (Local)	Ambient Turbidity (NTU)	Sentinel Turbidity (NTU)	Sentinel> Ambient (Y/N)
10/3/2017 15:00	7.4	2.7	N	10/4/2017 4:30	4.8	7.1	Y	10/4/2017 18:00	6.9	2.7	N
10/3/2017 15:15	6.6	2.4	N	10/4/2017 4:45	5	6.3	Y	10/4/2017 18:15	7.2	2.7	N
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10/3/2017 16:15	6.5	2.4	N	10/4/2017 5:45	5.4	7.8	Y	10/4/2017 19:15	8.7	3.6	N
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10/3/2017 16:45	6.1	2.8	N	10/4/2017 6:15	5.2	9	Y	10/4/2017 19:45	9.4	4.1	N
10/3/2017 17:00	7	2.8	N	10/4/2017 6:30	5.8	7.2	Y	10/4/2017 20:00	8.4	4	N
10/3/2017 17:15	7	4.4	N	10/4/2017 6:45	5.4	8.8	Y	10/4/2017 20:15	8.2	4	N
10/3/2017 17:30	7	4.7	N	10/4/2017 7:00	5.5	8	Y	10/4/2017 20:30	9	3.6	N
10/3/2017 17:45	6.3	4	N	10/4/2017 7:15	5.6	7.5	Y	10/4/2017 20:45	8.4	3.5	N
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10/3/2017 20:45	10.6	4.3	N	10/4/2017 10:15	7.8	3.1	N	10/4/2017 23:45	8.3	5.3	N
10/3/2017 21:00	11.1	4.6	N	10/4/2017 10:30	7.3	4.5	N	10/5/2017 0:00	7.7	6.2	N
10/3/2017 21:15	9.8	4.7	N	10/4/2017 10:45	7.5	3.9	N	10/5/2017 0:15	7.8	5.1	N
10/3/2017 21:30	8.8	4.6	N	10/4/2017 11:00	7.6	9	Y	10/5/2017 0:30	7.2	5.7	N
10/3/2017 21:45	9	4.7	N	10/4/2017 11:15	6.5	16.7	Y	10/5/2017 0:45	7	5.4	N
10/3/2017 22:00	8.3	4.8	N	10/4/2017 11:30	7.4	6	N	10/5/2017 1:00	7.5	4.9	N
10/3/2017 22:15	7.3	6.1	N	10/4/2017 11:45	6.8	5.3	N	10/5/2017 1:15	7	8.2	Y
10/3/2017 22:30	7	4.7	N	10/4/2017 12:00	7.7	5.1	N	10/5/2017 1:30	8.1	4.9	N
10/3/2017 22:45	6.6	5.3	N	10/4/2017 12:15	6.6	6.1	N	10/5/2017 1:45	9.1	6.5	N
10/3/2017 23:00	7.1	6.1	N	10/4/2017 12:30	7.6	4	N	10/5/2017 2:00	9.2	5.2	N
10/3/2017 23:15	6.5	6	N	10/4/2017 12:45	7.7	3.9	N	10/5/2017 2:15	8.5	3.7	N
10/3/2017 23:30	6.6	6.9	Y	10/4/2017 13:00	8.3	4.8	N	10/5/2017 2:30	10.2	5.2	N
10/3/2017 23:45	7.2	5.2	N	10/4/2017 13:15	8.5	3.9	N	10/5/2017 2:45	10.1	4.2	N
10/4/2017 0:00	6.8	6.3	N	10/4/2017 13:30	9.2	5.5	N	10/5/2017 3:00	10.3	4.9	N
10/4/2017 0:15	7.2	5.6	N	10/4/2017 13:45	9.4	4.5	N	10/5/2017 3:15	9	6.3	N
10/4/2017 0:30	7.4	6.4	N	10/4/2017 14:00	11.1	3.1	N	10/5/2017 3:30	9.2	4.5	N
10/4/2017 0:45	7.1	5	N	10/4/2017 14:15	10	2.5	N	10/5/2017 3:45	8.4	4.1	N
10/4/2017 1:00	7.1	4.3	N	10/4/2017 14:30	9.8	2	N	10/5/2017 4:00	7.4	4.4	N
10/4/2017 1:15	8.3	4.6	N	10/4/2017 14:45	9.7	2.1	N	10/5/2017 4:15	7.3	4.4	N
10/4/2017 1:30	9	5.1	N	10/4/2017 15:00	9.3	2.4	N	10/5/2017 4:30	6.4	4.6	N
10/4/2017 1:45	7.9	4.5	N	10/4/2017 15:15	8.5	2.1	N	10/5/2017 4:45	6.2	5.1	N
10/4/2017 2:00	9.1	4	N	10/4/2017 15:30	8.5	1.8	N	10/5/2017 5:00	5.3	5.2	N
10/4/2017 2:15	7	5.3	N	10/4/2017 15:45	7.2	1.8	N	10/5/2017 5:15	5.3	5.3	N
10/4/2017 2:30	7.2	5.5	N	10/4/2017 16:00	7.3	1.6	N	10/5/2017 5:30	4.8	5	Y
10/4/2017 2:45	6.6	4.8	N	10/4/2017 16:15	6.4	1.8	N	10/5/2017 5:45	5.7	5	N
10/4/2017 3:00	6.6	5.7	N	10/4/2017 16:30	7	1.6	N	10/5/2017 6:00	5.6	4.8	N
10/4/2017 3:15	6.2	5.1	N	10/4/2017 16:45	7.5	2.6	N	10/5/2017 6:15	5.4	4.9	N
10/4/2017 3:30	5.9	4.7	N	10/4/2017 17:00	6.4	2.7	N	10/5/2017 6:30	6.1	5.7	N
10/4/2017 3:45	5.5	5.9	N	10/4/2017 17:15	6.5	2	N	10/5/2017 6:45	5.9	6.4	Y
10/4/2017 4:00	4.9	6.4	Y	10/4/2017 17:30	6.7	2.3	N	10/5/2017 7:00	6.1	7.8	Y
10/4/2017 4:15	5.1	7	Y	10/4/2017 17:45	6.6	2.1	N				

Average	7.5	6.0	N
Maximum	11.1	16.7	Y

TRC Weekly CAMP Report

Gowanus Canal TB-4 Dredging and Pilot Study
Brooklyn, New York
Weekly Report

(TRC Project No.274286-0000-00000)

Community Air Monitoring Project
1st Weekly Monitoring Period
Summary Report:

October 2nd , through October 6th, 2017

Report Contents

- Executive Summary
- Daily Data Summary Report – PM_{10}/TVOC
- Daily Meteorological Summary Report
- Periodic Monitoring Results

Gowanus Canal TB-4 Dredging and Pilot Study
Brooklyn, New York

Executive Summary – Week 1 Monitoring Period
October 2nd, through October 6th, 2017

The following report summarizes site air monitoring activities for the Week 1 monitoring period from October 2nd, 2017 through October 6th, 2017. The start and stop times associated with each daily monitoring period are listed on the respective daily data sheets.

TRC continued to operate two (2) air monitoring stations on the Citizen Property or Staging Area, and five (5) air monitoring stations in the 4th St Turning Basin Area using the equipment specified previously in the *Gowanus Canal TB-4 Dredging and Pilot Study Executive Summary – Background Monitoring Period Report*. During the Week 1 monitoring period of October 2nd,through October 6th, 2017, there were no PM_{10} or TVOC exceedances of the action level of 150ug/m^3 or 1,000 ppb respectively as defined in the *Community Air Monitoring Plan for the Gowanus Canal TB-4 Dredging and Pilot Study Project Brooklyn, NY, August 2017.*

Additional monitoring for hydrogen sulfide, ammonia, and formaldehyde took place at all stations throughout the weekly monitoring period at least twice daily. The results of these measurements were as follows:

Station	**Hydrogen Sulfide (H_2S) ppb**	**Ammonia (NH_3) ppm**	**Formaldehyde (CHO) ppb**
ST-1	<3.0	< 1.0	< 50
ST-2	<3.0	< 1.0	< 50
ST-3	<3.0	< 1.0	< 50
ST-4	<3.0	< 1.0	< 50

ST-5	<3.0	< 1.0	< 50
ST-6	<3.0	< 1.0	< 50
ST-7	<3.0	< 1.0	< 50

During the Week 1 monitoring period of October 2nd, through October 6th, 2017, TRC conducted Volatile Organic Compounds (USEPA Method TO-15) sampling at Station 4. A single sample was collected at ST-4 on October 5th, through October 6th, 2017, over a 24-hour sampling period, and was shipped to Con-Test Analytical Laboratory for analyses. The results of the summa canister sampling analyses are pending.

Site activities were conducted at the Citizen Property on October 2nd through October 6th, 2017 which included the following:

- Site clean-up from previous phase on Citizen Property
- Material and Equipment deliveries on Citizen Property
- General vehicular traffic site-wide throughout the monitoring period
- Barge preparation
- Pad preparation

Site activities were conducted at the 4th St Turning Basin Area of the Canal on October 5th and October 6th, 2017 which included the following:

- Staging and maneuvering of the work barges;
- Pre-access derigging; resulting in the removal of; small debris (timbers, tires and miscellaneous items)
- Mobilization of additional equipment on the periphery work area.

Gowanus Canal TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM_{10}
(TRC Project No.274286-0000-00000)

10/02/2017 06:30 AM - 10/02/17 23:45 PM

Station 1

TVOC			PM_{10}		
Max.	5	ppb	Max.	18	ug/m^3
Avg.	1	ppb	Avg.	7	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 2

TVOC			PM_{10}		
Max.	2	ppb	Max.	21	ug/m^3
Avg.	<1	ppb	Avg.	6	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 3

TVOC			PM_{10}		
Max.	27	ppb	Max.	<1	ug/m^3
Avg.	1	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 4

TVOC			PM_{10}		
Max.	35	ppb	Max.	9	ug/m^3
Avg.	5	ppb	Avg.	5	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 5

TVOC			PM_{10}		
Max.	31	ppb	Max.	19	ug/m^3
Avg.	8	ppb	Avg.	6	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 6

TVOC			PM_{10}		
Max.	45	ppb	Max.	11	ug/m^3
Avg.	11	ppb	Avg.	5	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 7

TVOC			PM_{10}		
Max.	33	ppb	Max.	18	ug/m^3
Avg.	10	ppb	Avg.	4	ug/m^3
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds PM_{10} – Particulates as PM_{10}

Max. – Maximum daily average (10 min. avg. – TVOC / 15 min. avg. – PM_{10})

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM_{10})

Exc. – Total # of averages which exceed the action level (≥1,,000 ppb - TVOC / ≥150 ug/m3 - PM_{10})

Gowanus Canal TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM_{10}
(TRC Project No.274286-0000-00000)

10/03/2017 00:00 AM - 10/03/17 23:45 PM

Station 1

TVOC			PM_{10}		
Max.	7	ppb	Max.	17	ug/m^3
Avg.	<1	ppb	Avg.	8	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 2

TVOC			PM_{10}		
Max.	34	ppb	Max.	18	ug/m^3
Avg.	3	ppb	Avg.	9	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 3

TVOC			PM_{10}		
Max.	33	ppb	Max.	<1	ug/m^3
Avg.	13	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 4

TVOC			PM_{10}		
Max.	28	ppb	Max.	14	ug/m^3
Avg.	13	ppb	Avg.	4	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 5

TVOC			PM_{10}		
Max.	30	ppb	Max.	12	ug/m^3
Avg.	13	ppb	Avg.	6	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 6

TVOC			PM_{10}		
Max.	9	ppb	Max.	17	ug/m^3
Avg.	3	ppb	Avg.	9	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 7

TVOC			PM_{10}		
Max.	33	ppb	Max.	<1	ug/m^3
Avg.	10	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds PM_{10} – Particulates as PM_{10}

Max. – Maximum daily average (10 min. avg. – TVOC / 15 min. avg. – PM_{10})

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM_{10})

Exc. – Total # of averages which exceed the action level (≥1,,000 ppb - TVOC / ≥150 ug/m3 - PM_{10})

Gowanus Canal TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM_{10}
(TRC Project No.274286-0000-00000)

10/4/2017 00:00 AM - 10/4/17 23:45 PM

Station 1

TVOC			PM_{10}		
Max.	33	ppb	Max.	17	ug/m^3
Avg.	8	ppb	Avg.	10	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 2

TVOC			PM_{10}		
Max.	24	ppb	Max.	16	ug/m^3
Avg.	1	ppb	Avg.	11	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 3

TVOC			PM_{10}		
Max.	44	ppb	Max.	<1	ug/m^3
Avg.	8	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 4

TVOC			PM_{10}		
Max.	38	ppb	Max.	18	ug/m^3
Avg.	9	ppb	Avg.	10	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 5

TVOC			PM_{10}		
Max.	47	ppb	Max.	16	ug/m^3
Avg.	19	ppb	Avg.	8	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 6

TVOC			PM_{10}		
Max.	23	ppb	Max.	24	ug/m^3
Avg.	16	ppb	Avg.	10	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 7

TVOC			PM_{10}		
Max.	44	ppb	Max.	<1	ug/m^3
Avg.	22	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds PM_{10} – Particulates as PM_{10}

Max. – Maximum daily average (10 min. avg. – TVOC / 15 min. avg. – PM_{10})

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM_{10})

Exc. – Total # of averages which exceed the action level (≥1,,000 ppb - TVOC / ≥150 ug/m3 - PM_{10})

Gowanus Canal TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM_{10}
(TRC Project No.274286-0000-00000)

10/5/2017 00:00 AM - 10/5/17 23:45 PM

Station 1

TVOC			PM_{10}		
Max.	35	ppb	Max.	20	ug/m^3
Avg.	11	ppb	Avg.	14	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 2

TVOC			PM_{10}		
Max.	26	ppb	Max.	23	ug/m^3
Avg.	4	ppb	Avg.	11	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 3

TVOC			PM_{10}		
Max.	110	ppb	Max.	<1	ug/m^3
Avg.	23	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 4

TVOC			PM_{10}		
Max.	53	ppb	Max.	54	ug/m^3
Avg.	22	ppb	Avg.	13	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 5

TVOC			PM_{10}		
Max.	103	ppb	Max.	43	ug/m^3
Avg.	30	ppb	Avg.	8	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 6

TVOC			PM_{10}		
Max.	23	ppb	Max.	62	ug/m^3
Avg.	9	ppb	Avg.	8	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 7

TVOC			PM_{10}		
Max.	33	ppb	Max.	20	ug/m^3
Avg.	8	ppb	Avg.	9	ug/m^3
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds PM_{10} – Particulates as PM_{10}

Max. – Maximum daily average (10 min. avg. – TVOC / 15 min. avg. – PM_{10})

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM_{10})

Exc. – Total # of averages which exceed the action level (≥1,,000 ppb - TVOC / ≥150 ug/m3 - PM_{10})

Gowanus Canal TB-4 Dredging and Capping Pilot Study
Brooklyn, New York
Daily Station Report – TVOC/PM_{10}
(TRC Project No.274286-0000-00000)

10/6/2017 00:00 AM - 10/6/17 18:00 PM

Station 1

TVOC			PM_{10}		
Max.	65	ppb	Max.	20	ug/m^3
Avg.	28	ppb	Avg.	12	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 2

TVOC			PM_{10}		
Max.	113	ppb	Max.	20	ug/m^3
Avg.	7	ppb	Avg.	11	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 3

TVOC			PM_{10}		
Max.	22	ppb	Max.	<1	ug/m^3
Avg.	8	ppb	Avg.	<1	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 4

TVOC			PM_{10}		
Max.	112	ppb	Max.	27	ug/m^3
Avg.	51	ppb	Avg.	13	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 5

TVOC			PM_{10}		
Max.	138	ppb	Max.	18	ug/m^3
Avg.	58	ppb	Avg.	11	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 6

TVOC			PM_{10}		
Max.	<1	ppb	Max.	20	ug/m^3
Avg.	<1	ppb	Avg.	13	ug/m^3
Exc.	0	total	Exc.	0	Total

Station 7

TVOC			PM_{10}		
Max.	<1	ppb	Max.	20	ug/m^3
Avg.	<1	ppb	Avg.	20	ug/m^3
Exc.	0	total	Exc.	0	Total

TVOC – Total Volatile Organic Compounds PM_{10} – Particulates as PM_{10}

Max. – Maximum daily average (10 min. avg. – TVOC / 15 min. avg. – PM_{10})

Avg. – Daily average (15 min. avg. – TVOC / 15 min. avg. – PM_{10})

Exc. – Total # of averages which exceed the action level (≥1,,000 ppb - TVOC / ≥150 ug/m3 - PM_{10})

Gowanus Canal TB-4 Dredging and Pilot Study
Brooklyn, New York

Meteorological Summary

October 2nd , through October 6th, 2017

d

October 2nd, 2017		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
E	**3.29**	**63.7**

October 3rd, 2017		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
E	**3.86**	**62.4**

October 4th , 2017		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SSW	**1.42**	**66.3**

October 5th , 2017		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SSW	**1.05**	**72.0**

October 6th , 2017		
Wind Direction (°)	Wind Speed (mph)	Temperature (°F)
SSW	**1.29**	**73.9**

*All meteorological data represents an average for the time period of 06:30 to 23:45 for Monday.

*All meteorological data represents averages for the time period of 00:00 to 23:45 for Tuesday, Wednesday, and Thursday.

*All meteorological data represents an average for the time period of 00:30 to 18:00 for Friday.

Wilson-Ihrig Weekly Noise Monitoring Report

WILSON IHRIG
ACOUSTICS, NOISE & VIBRATION

CALIFORNIA
WASHINGTON
NEW YORK

WI #15-081

MEMORANDUM

October 9, 2017

To: William Lee/ de maximis, inc.
Kirsten Meyers / TRC

From: Silas Bensing, Ani Toncheva / Wilson Ihrig

Subject: Gowanus Canal 4th Street Turning Basin Dredging and Capping Pilot Study, Weekly Noise Monitoring Report, 2 – 6 October, 2017

Noise Monitoring Locations

Figure 1 shows the noise monitoring locations. One monitor is installed at a light pole on the north side of TB4, labeled NM-1. A second noise monitor is installed at the existing guard rail on the south side of TB4, labeled NM-2. NM-1 is approximately 25 feet from the north edge of the canal and NM-2 is approximately 4 feet from the south edge of the canal. Photos 1 and 2 show the recent field conditions at the monitors.

Noise Monitoring Results

Figures 2 through 10 present the hourly Leq noise levels compared with the noise thresholds discussed in the noise monitoring plan[1]. Commercial and Industrial land uses are assigned an hourly Leq noise limit of 80 dBA for Daytime and Evening time periods. The average baseline noise measured in the project area in 2015 are also shown for reference[2].

Due to cellular connectivity issues, no data are available for NM-1 after 1PM Thursday, Oct. 5; and due to maintenance work on the monitoring equipment no data are available for NM-2 between 3PM-6PM on Thursday, Oct. 5.

[1] Wilson Ihrig. *Gowanus Canal 4th Street Turning Basin Dredging and Capping Pilot Study Noise and Vibration Monitoring Plan*. California: prepared for Gowanus Canal Remedial Design Group, DRAFT May 2017

[2] Wilson Ihrig. *Gowanus Canal Remedial Design Project RTA-1 Noise and Vibration Baseline Report*. California: prepared for Geosyntec Consultants Inc., October 2015.

Figure 1: Long-term Noise Monitoring Locations for Gowanus TB4 Dredging and Capping Pilot Study

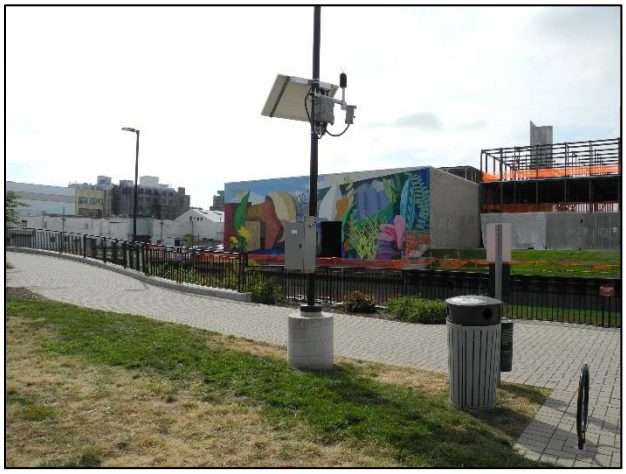


Photo 1: Noise Monitoring Location NM-1 (26 September 2017)

Photo 2: Noise Monitoring Location NM-2 (25 September 2017)

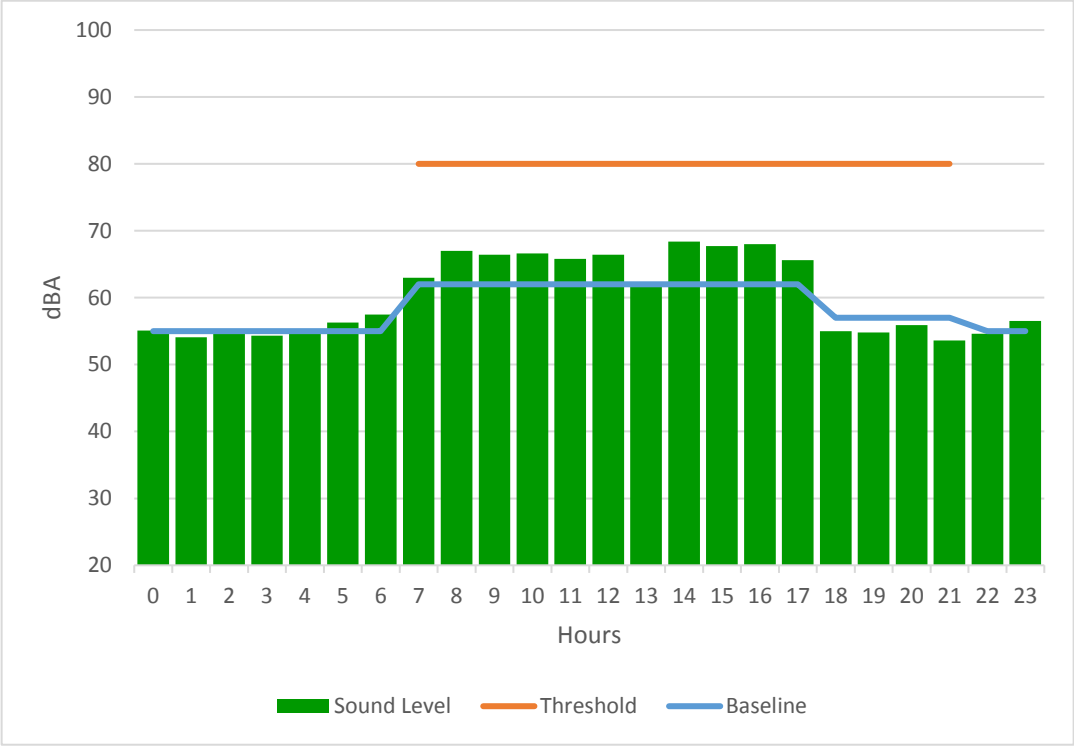


Figure 2: North Monitor NM-1 on Monday, Oct 2

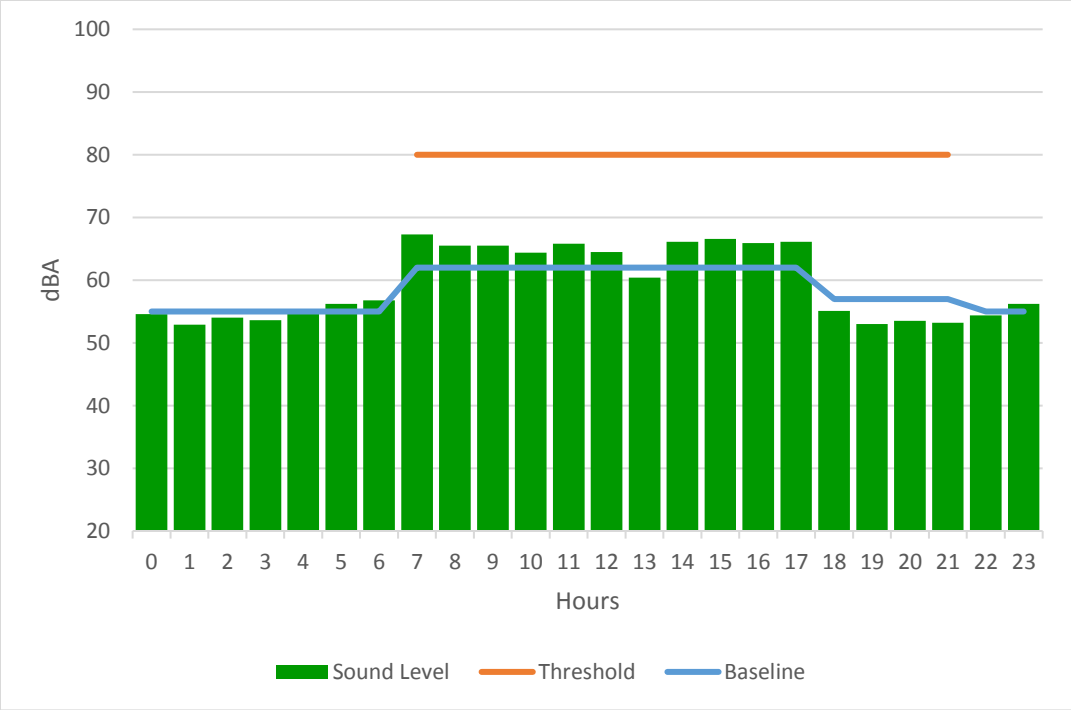


Figure 3: North Monitor NM-1 on Tuesday, Oct 3

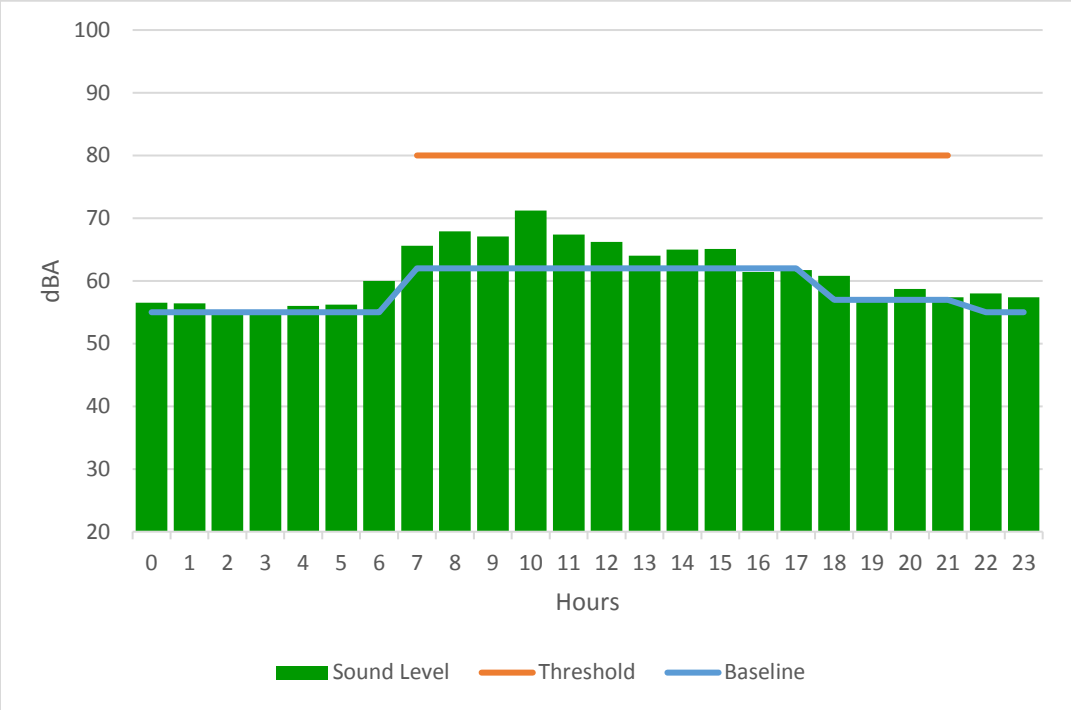


Figure 4: North Monitor NM-1 on Wednesday, Oct 4

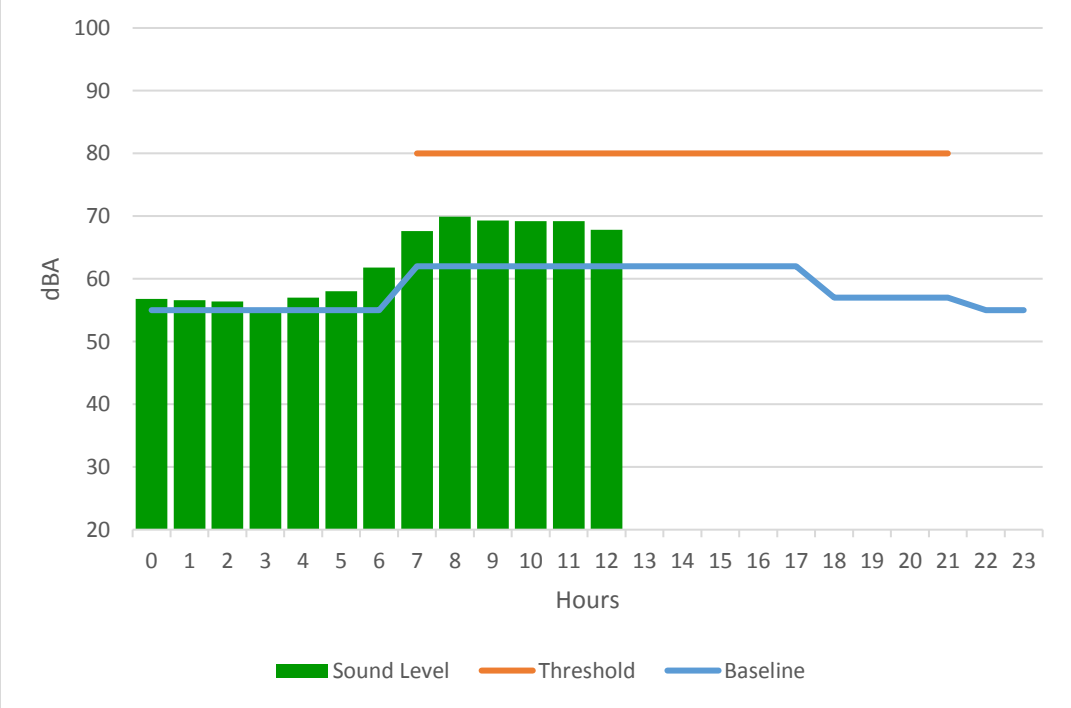


Figure 5: North Monitor NM-1 on Thursday, Oct 5

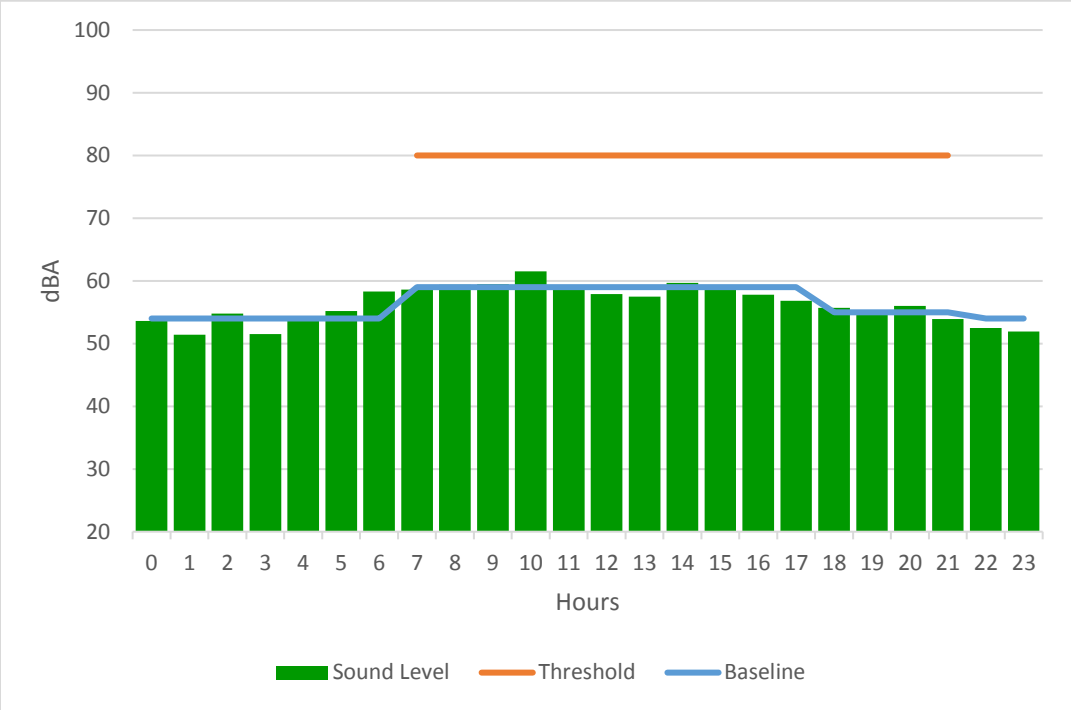


Figure 6: South Monitor NM-2 on Monday, Oct 2

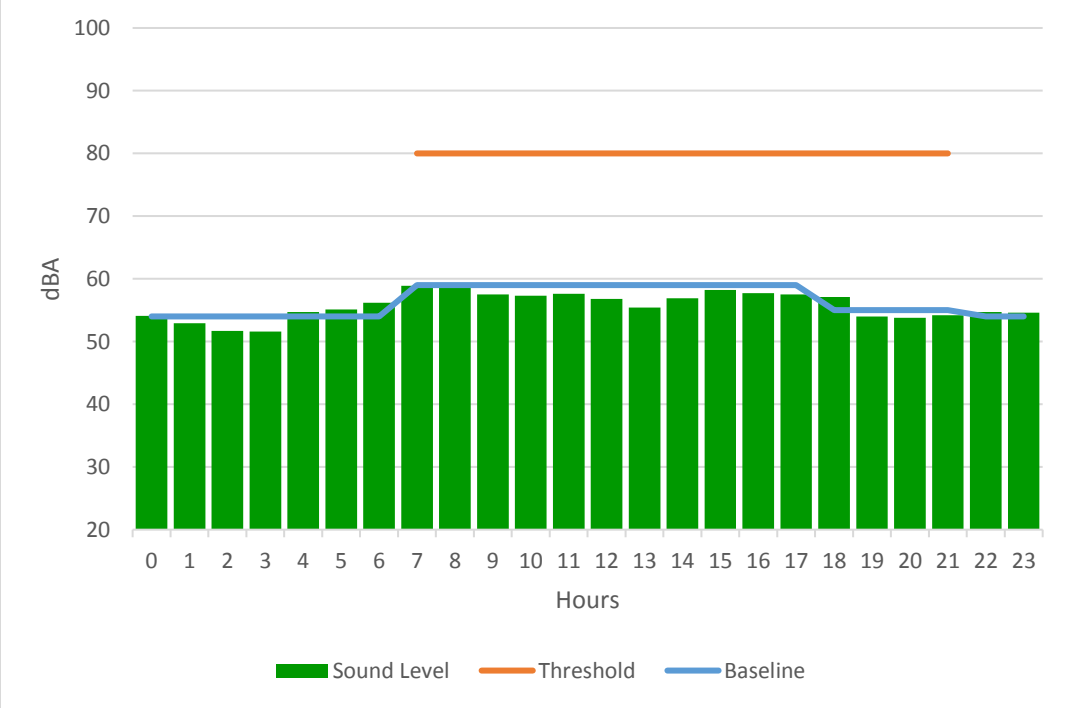


Figure 7: South Monitor NM-2 on Tuesday, Oct 3

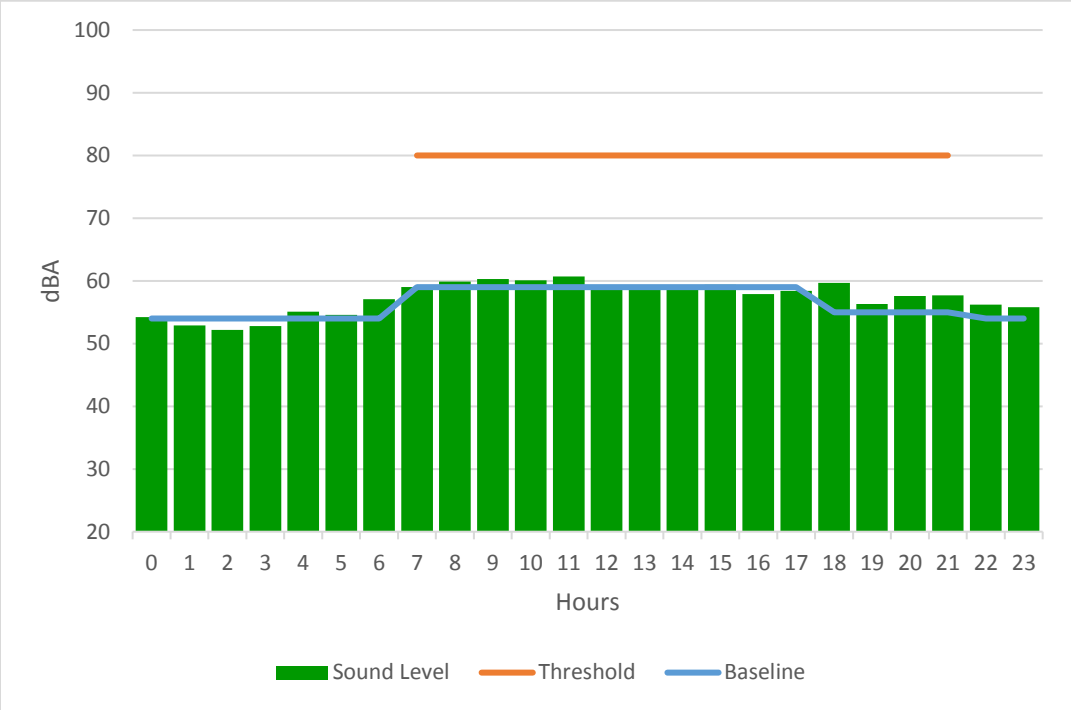


Figure 8: South Monitor NM-2 on Wednesday, Oct 4

Figure 9: South Monitor NM-2 on Thursday, Oct 5

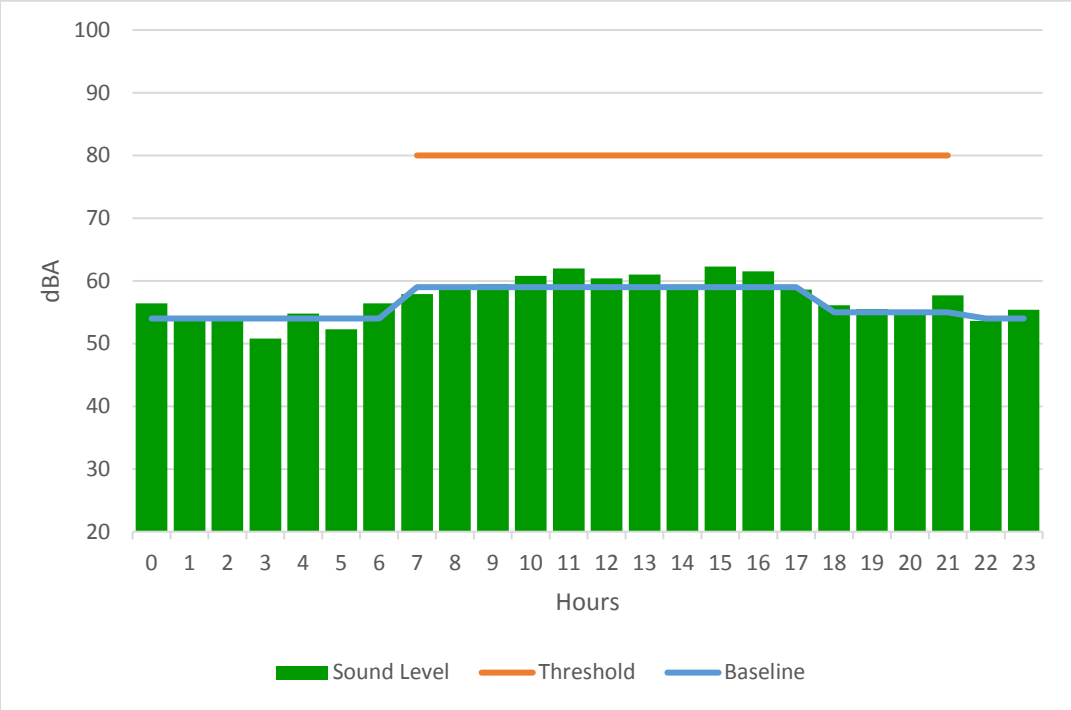
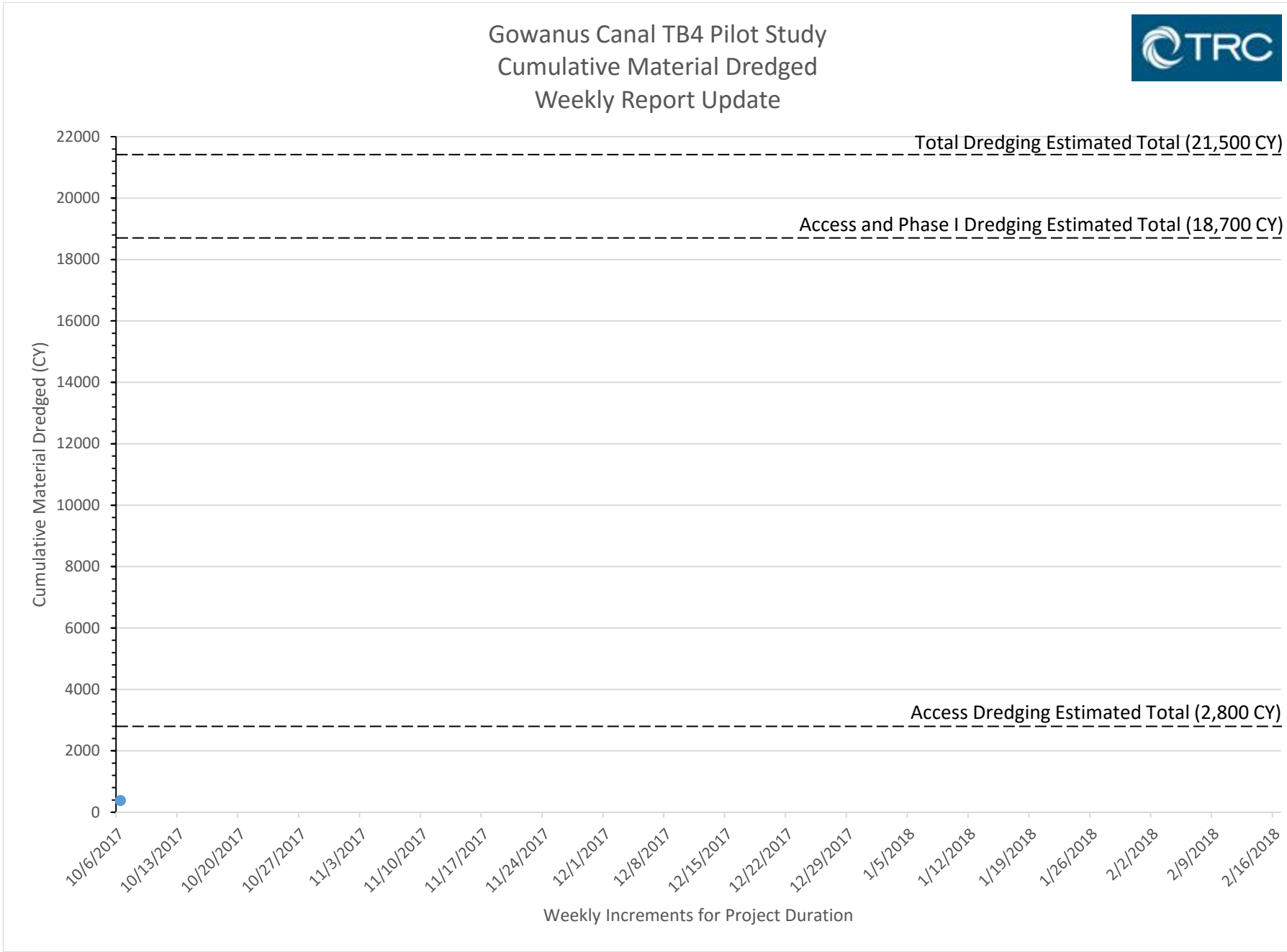


Figure 10: South Monitor NM-2 on Friday, Oct 6

Water Treatment System Monitoring – Plant not operating at this time

Cumulative Dredged Material Chart


Gowanus Canal TB4 Pilot Study
Cumulative Material Dredged
Weekly Report Update
TRC
Total Dredging Estimated Total (21,500 CY)
Access and Phase I Dredging Estimated Total (18,700 CY)
Access Dredging Estimated Total (2,800 CY)
Cumulative Material Dredged (CY)
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
10/6/2017
10/13/2017
10/20/2017
10/27/2017
11/3/2017
11/10/2017
11/17/2017
11/24/2017
12/1/2017
12/8/2017
12/15/2017
12/22/2017
12/29/2017
1/5/2018
1/12/2018
1/19/2018
1/26/2018
2/2/2018
2/9/2018
2/16/2018
Weekly Increments for Project Duration